

REMARKS

I. General

Claims 26, 29 – 39 and 48 are presently pending in the application. The issues in the current Office Action are as follows:

- Claim 37 is objected to because of informalities.
- Claims 29 and 35 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,038,780 to Boetzkes (hereinafter, “Boetzkes”).
- Claims 26, 30, 31 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claims 29 and 35 above, and further in view of U.S. Patent No. 4,982,742 to Claude (hereinafter, “Claude”).
- Claim 32 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above.
- Claim 33 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above, and further in view of U.S. Patent No. 5,397,338 to Grey et al. (hereinafter, “Grey”).
- Claims 36 – 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 35 above, and further in view of U.S. Patent Publication No. 2002/0099412 to Fischell et al. (hereinafter, “Fischell”).
- Claim 48 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above, and further in view of U.S. Patent Publication No. 2002/0099425 to Johnson et al. (hereinafter, “Johnson”).

Applicant appreciates the courtesy and professionalism extended by the Examiner thus far. Applicant hereby traverses the rejections and requests reconsideration and withdrawal in light of the amendments and remarks contained herein.

II. Claim Objection

Claim 37 is objected to because of informalities. Applicant has amended claim 37 to correct the minor grammatical error noted by the Examiner. No new matter has been added by this amendment. Accordingly, Applicant respectfully requests that the Examiner withdraw the objection to claim 37.

III. Claim Amendments

Further to the Examiner's Interview of August 31, 2010, claim 29 has been amended to recite "varying the value of the amplitude of the alternating current" Support for this amendment to claim 29 may be found at least in Table I on page 17, which is entitled "Variation of amplitude and frequency of current in a scanning programme." Claim 37 has been amended as discussed above. No new matter has been added by these amendments.

IV. Applicant's Statement of the Substance of Interview

Applicant thanks Examiner for taking part in an interview regarding the current rejections in this application. Applicant submits the following record of the telephone interview of August 31, 2010, in accordance with M.P.E.P. § 713.04.

The following persons participated in the interview: Examiner Shefali Patel, Applicant's Representative, John Brunner and Applicant's attorney Wayne Livingstone (reg. no. 60,988). Applicant's attorney submitted that Boetzkes' failed to teach the limitation of claim 29 requiring a control unit for constantly varying the amplitude of the alternating current to electrically stimulate and repair tissue. Examiner Patel noted that Boetzkes, col. 1, lines 32 – 35 teaches an alternating (AC) current, which exhibits a time-dependent amplitude variation. Applicant's Attorney and Representative noted that the disclosure of Boetzkes on which the Examiner relies seeks to distinguish between an alternating current and a direct current and does not describe the limitation of claim 29 noted above. It was agreed that claim 29 should be amended to recite, "varying constantly the value of the amplitude" and that this amendment would overcome the current rejection of claim 29.

V. Claim Rejections

A. 35 U.S.C. § 102(b) Rejection (Boetzkes)

Claims 29 and 35 are rejected under 35 U.S.C. § 102(b) as being anticipated by Boetzkes. In order for a claim to be anticipated under 35 U.S.C. § 102, “[t]he *identical invention* must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he elements must be arranged as required by the claim” M.P.E.P. § 2131 citing *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). The Applicant discusses the rejected claims below.

1. Independent claim 29

Claim 29, as amended, requires, “a control unit . . . for constantly varying the value of the amplitude of the alternating current to electrically stimulate and repair said tissue.” In the Office Action, the Examiner asserts that Boetzkes, Abstract & col. 1, lines 32 – 35 teach the variation of amplitude required by claim 29. The pertinent portion of Boetzkes provides:

Considering first the type of current produced, the current may be characterized as either a direct (DC) current, having an amplitude that is substantially constant as a function of time, or an alternating (AC) current, which exhibits a time-dependent amplitude variation.

Col. 1, lines, 28 – 32. Here, Boetzkes distinguishes between the different types of currents that can be used. In doing so, Boetzkes notes that the defining feature of a direct current is that it has an amplitude that is substantially constant. Boetzkes then defines an alternating current as one “which exhibits a time-dependent amplitude variation.” In characterizing direct current as having a constant amplitude and contrasting it with alternating current, which is characterized as having amplitude variation, Boetzkes loosely uses the word “amplitude” to mean an absolute measurement of current at any particular time.

Based on Boetzkes’ comparison of direct current and alternating current, one skilled in the art would have recognized that Boetzkes’ reference to “amplitude variation” is a reference to the absolute value of current over time and does not mean variation of the peak-

to-peak value of an alternating current as the normal meaning of “amplitude variation” would indicate. *See* thefreedictionary.com available at <http://www.thefreedictionary.com/amplitude> (providing alternative definitions of amplitude as, “The maximum absolute value of a periodically varying quantity. . . The maximum absolute value of a periodic curve measured along its vertical . . . The maximum absolute value reached by a voltage or current waveform”). Furthermore, the current specification at pages 16 – 17 discusses amplitude consistent with how one skilled in the art understands the term amplitude. For example, this portion of the specification describes a programme where the amplitude of alternating current is varied and another programme where the amplitude of alternating current is kept constant.

In sum, the cited portion of Boetzkes merely attempts to define what an alternating current is and does not describe how that alternating current is applied to a treatment area. Thus, one skilled in the art, having read the above quoted portion of Boetzkes, would not conclude that Boetzkes teaches the requirement for “a control unit . . . for constantly varying the value of the amplitude of the alternating current to electrically stimulate and repair said tissue.”

Moreover, the apparatus disclosed in Boetzkes shows circuitry that produces alternating current of fixed amplitude and frequency. Specifically, the alternating current circuit components disclosed in Boetzkes, Figs. 1 – 4 show components of a fixed value. It follows, therefore, that the amplitude of alternating current from this circuitry produces alternating current of fixed amplitude. Consistent with the foregoing, Boetzkes states that the preferred arrangement provides “an alternating therapeutic current of approximately 5 milliamperes” and not values between which the amplitude is varied. *See* Boetzkes at col. 5, lines 13 – 15.

In sum, the Examiner has not shown that Boetzkes teaches all the limitations of claim 29. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 102(b) rejection of claim 29.

2. Dependent claim 35

Dependent claim 35 depends from independent claim 29, and thus inherits all of the limitations of claim 29. It is respectfully submitted that dependent claim 35 is patentable at

least because of its dependence from independent claim 29 for the reasons discussed above. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 102(b) rejection of claim 35.

B. 35 U.S.C. § 103(a) Rejection over Boetzkes and further in view of Claude

Claims 26, 30, 31 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claims 29 and 35 above, and further in view of Claude. In an obviousness rejection, “[u]nder § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 15 – 17 (1966). The Applicant discusses below why the rejected claims are patentable over Boetzkes in view of Claude.

Dependent claims 26, 30, 31 and 39 depend either directly or indirectly from independent claim 29 and thus inherit all the limitations of claim 29. As discussed above, Boetzkes does not teach all the limitations of claim 29. Claude is not relied on and does not appear to cure this deficiency of Boetzkes. Therefore, it is respectfully submitted that dependent claims 26, 30, 31 and 39 are allowable at least because of their dependence from claim 29 for the reasons discussed above. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103(a) rejection of claims 26, 30, 31 and 39.

C. 35 U.S.C. § 103(a) Rejection over Boetzkes

Claim 32 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above. As discussed above, Boetzkes does not teach all the limitations of claim 29. It is respectfully submitted that dependent claim 32 is allowable at least because of its dependence from claim 29 for the reasons discussed above.

Moreover, claim 32 requires “the time period between each variation of amplitude is 0.1 s.” The Examiner has not cited any reference teaching this limitation of claim 32 and has, instead, cited *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) to assert that this limitation of claim 32 is merely discovering of an optimum value and involves routine skill. But as discussed above, the Examiner has not shown that Boetzkes teaches variation of the

value of the amplitude of alternating current to electrically stimulate and repair tissue.

Absent a showing of this teaching in the references, the Examiner cannot properly rely on *In re Boesch* to assert that claim 32 is obvious. “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” See M.P.E.P. 2144.05 II, B (citing, *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)).

In sum, the Examiner has not shown that Boetzkes renders claim 32 obvious. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103(a) rejection of claim 32.

D. 35 U.S.C. § 103(a) Rejection over Boetzkes and further in view of Grey

Claim 33 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above, and further in view of Grey. As discussed above, Boetzkes does not teach all the limitations of claim 29. Grey is not relied on and does not appear to cure this deficiency of Boetzkes. Therefore, it is respectfully submitted that dependent claim 33 is allowable at least because of its dependence from claim 29 for the reasons discussed above. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103(a) rejection of claim 33.

E. 35 U.S.C. § 103(a) Rejection over Boetzkes and further in view of Fischell

Claims 36 – 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 35 above, and further in view of Fischell. Dependent claims 36 – 38 depend either directly or indirectly from independent claim 29 and thus inherit all the limitations of claim 29. As discussed above, Boetzkes does not teach all the limitations of claim 29. Fischell is not relied on and does not appear to cure this deficiency of Boetzkes. Therefore, it is respectfully submitted that dependent claims 36 – 38 are allowable at least because of their dependence from claim 29 for the reasons discussed above. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103(a) rejection of claims 36 – 38.

F. 35 U.S.C. § 103(a) Rejection over Boetzkes and further in view of Johnson

Claim 48 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boetzkes, as applied to claim 29 above, and further in view of Johnson. As discussed above, Boetzkes does not teach all the limitations of claim 29. Grey is not relied on and does not appear to cure this deficiency of Boetzkes. Therefore, it is respectfully submitted that dependent claim 48 is allowable at least because of their dependence from claim 29 for the reasons discussed above. Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103(a) rejection of claim 48.

VI. Related UK Patent

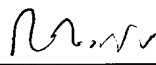
In an information disclosure statement filed concurrently herewith, the Applicant has included, for the Examiner's perusal, the UK patent that is related to the current application.

VII. Conclusion

In view of the above, Applicant believes the pending application is in condition for allowance and respectfully requests favorable reconsideration. The fee of \$65.00 set forth under 37 CFR 1.17(a)(1) for a one-month extension for response for a small entity and \$180.00 set forth under 37 CFR 1.17(p) for filing an information disclosure statement will be paid by credit card. Please charge any additional fees required or credit any overpayment to Deposit Account No. 06-2380, under Order No. 51407/P029US/10605267 during the pendency of this Application pursuant to 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Respectfully submitted,

By 

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